

# EP066405WT001-TDS

## COCOON ABS-Fir(FR)

It is a thermoplastic engineering material with flame-retardance. The high impact strength and strong interlayer adhesion make it an ideal material in printing plastic components of industrial machinery. The material fulfills flame retardancy according to UL 94 V-0 (@2.0mm), and it also has good mechanical and thermal properties.

### Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	ISO 1183	g/cm <sup>3</sup>	1.16
Melt Flow Rate	220°C, 10kg	ISO 1133	g/10min	35
Mechanical Properties				
Tensile Strength	5mm/min	ISO 527-1	MPa	45
Elongation @ Break	5mm/min	ISO 527-1	%	20
Flexural Strength	2mm/min	ISO 178	MPa	65
Flexural Modulus	2mm/min	ISO 178	MPa	2300
Impact Strength, Notched	1J	ISO 179-1	kJ/m <sup>2</sup>	12
Flame-retardant Property				
Flame Class Rating	2.0mm	UL94	/	V0

*Note: The typical physical properties are not intended for use as sales specifications.*

## Part 2 Printed Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Mechanical Properties				
Tensile Strength(X-Y)	50mm/min	ISO 527-1	MPa	42
Tensile Modulus(X-Y)	50mm/min	ISO 527-1	MPa	2100
Tensile Strength(Z)	50mm/min	ISO 178	MPa	22
Tensile Modulus(Z)	50mm/min	ISO 178	MPa	1750
Flexural Strength	2mm/min	ISO 178	MPa	65
Flexural Modulus	2mm/min	ISO 178	MPa	2150
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m <sup>2</sup>	15
Thermal Property				
Heat Deflection Temperature	0.45MPa	ISO 75-1	°C	100

*Note: All specimens are printed under the following conditions: nozzle temperature = 270°C, printing speed = 130 mm/s, t build plate temperature=95°C, infill = 100%, nozzle diameter = 0.4mm.*



Printing Path Direction of Specimen (Z)



Printing Path Direction of Specimen (X-Y)

### Part 3 Printing Guidelines

Parameters	Settings
Nozzle Temperature	260-280°C
Build Plate Temp.	90-100°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	/
Enclosed-chamber Printing	Yes
Print Speed	60-200mm/s
Drying recommendations	80 °C in a hot air dryer for 2-4hours

#### Disclaimer:

The values provided in this data sheet are for reference and comparison purposes only. They should not be used for design specifications or quality control. Actual values may vary depending on printing conditions. The ultimate performance of printed parts depends not only on the material but also on the part design, environmental conditions, and printing conditions. The product specifications are subject to change without notice.

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